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ABSTRACT

There is a high rate of children's injuries on America's playgrounds. This report examines this issue and provides guidance on how to make playgrounds safer and more fun for children, and procedures for performing an initial analysis of the safety of a local playground using a playground safety checklist. Additionally, it provides a step-by-step guide for conducting a campaign to successfully change playgrounds found to be dangerous. Concluding pages present additional information and resources. (GR)

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Fun *and* Safe

A Playground Guide for Parents
and others who care about kids' safety

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Kids love playgrounds — there's no question about that. But why are so many kids getting hurt on America's playgrounds? For that question, there's no easy answer — many different factors contribute to the high rate of playground injuries in the U.S. The good news is that there's a lot we can do to lower the injury rate and improve our playgrounds. And thanks to efforts nationwide, that's just what's happening.

You too can make a difference.

If you are a parent, teacher, school administrator, child care provider, or anyone else who cares about child safety, this guide is for you. It will get you started as an advocate for playgrounds that are safer and more fun for kids.

First, you need to become an educated consumer. To help you, we begin with a look at statistics to show you the scope of the problem. Then, information on playground hazards and the play patterns of children will help you understand how and why these injuries are occurring.

With this background, you'll be ready to start evaluating the playground your kids play on with a safety checklist that walks you through an initial inspection for major hazards. Finally, we'll share some ideas about how to successfully work for change in your community and improve the safety of your playground.

Playground Injuries

Public playground equipment continues to threaten the safety of our kids. The Consumer Product Safety Commission (CPSC) estimates that nearly 150,000 children are treated in hospital emergency departments each year for injuries related to public playground equipment. Even worse, at least 17 children die as a result of playground equipment-related injuries each year.

Common Causes of Playground Equipment-Related Injuries

- Falls
- Impact with Moving Equipment
- Running into Stationary Equipment
- Sharp Edges
- Protrusions and Projections
- Pinch Points
- Hot Surfaces
- Debris in the Playground Area

Common Causes of Playground Equipment-Related Deaths

- Falls
- Strangulation/Entanglement
- Strangulation/Head Entrapment
- Impact with Moving Equipment
- Equipment Collapse or "Tip-Overs"

Falls: The Biggest Problem on Playgrounds

Falls — usually to the ground below playground equipment — account for approximately 75 percent of all injuries related to public playground equipment. Not only are falls the most common cause of injury for children of all ages, they are also related to the most severe injuries. Nine out of 10 serious injuries (mainly head injuries and fractures) are caused by falls to the surface. Head injuries resulting from falls are a major cause of playground equipment-related deaths.

Injuries by Age

- Children under the age of six are most frequently injured playing on slides.
- Children six and older are most frequently injured playing on climbers.
- Children ages 5 to 9 have the highest injury rate on public playground equipment.

Different Ages, Different Injuries

Superficial facial injuries (i.e., cuts and bruises) and serious head injuries (i.e., skull fractures, concussions, and internal head injuries) are the major patterns of injury for children under six. This makes sense since young children typically do not have the motor coordination or thinking skills necessary to protect their heads by breaking a fall with their arms. Because they focus on just one thing at a time and don't notice all that is going on around them, young children are at greater risk for head and facial injuries caused by impact with moving equipment such as swings. Playground equipment-related deaths have occurred when a young child runs into the path of the moving swing and gets hit in the head.

Older children better anticipate and avoid moving swings. However, they are more likely to get hurt jumping from swings. And when they fall from climbing equipment or slides, their more advanced thinking and physical skills help them react better. By stopping most falls with their arms, older children reduce the risk of head injury but simultaneously increase the risk of upper limb fracture.

Other Causes of Death

About half of all playground equipment-related deaths are caused by strangulation, which typically involve clothing entanglement of something a child is wearing. Scarves, mittens on strings, jacket strings, jacket hoods, or other items of clothing can get caught in narrow gaps between equipment components or on protrusions at the top of slides, on open "S" hooks on swings, and on vertical posts. Ropes, jump ropes, and leashes, either attached to equipment or worn around a child's neck, have also been implicated in strangulation deaths.

Head entrapment — when a child's head cannot pass through an opening formed by equipment components, thereby trapping his neck — is the other major cause of playground equipment-related strangulation. A child's head may be caught or wedged in place when he or she attempts to enter an opening either head-first or feet-first. Entrapment by head-first entry generally occurs when a child places her head through an opening in one orientation, then, after turning her head to a different orientation, is unable to withdraw from the opening. Entrapment by feet-first entry generally occurs when a child slides her feet into an opening that is large enough to permit passage of her body but is not large enough to permit passage of her head.

Children have also died as a result of injuries sustained when playground equipment collapses or tips over. Possible causes of equipment collapsing or tipping over include loose or missing hardware and deteriorated equipment.

Making Playgrounds Safe

Playground injuries are a reality. Fortunately, many can be prevented. Looking at three general injury prevention strategies — eliminating hazards, matching equipment to the sizes and skills of children, and always supervising children on playgrounds — provides good background for performing an initial analysis of the safety of your own local playground.

Eliminate Hazards

Eliminating — or at least reducing — hazards goes a long way toward making playgrounds safer. Since falls cause the vast majority of playground injuries, that's the best place to start.

The most important safety measure on any playground is what's under it — protective surfacing under and around equipment that will cushion falls. Protective surfacing cannot prevent all fall injuries, but it can help reduce both the frequency and severity of injuries. Falls onto a resilient surface are less likely to result in a life-threatening injury. In short, the greater the resiliency, the greater the safety. Various loose-fill surfacing materials, such as wood chips installed and maintained at depths of nine-12 inches, help provide good protection against fall injuries. Some synthetic materials, including rubber matting and shredded tires, are also manufactured for use as playground surfaces and meet resiliency requirements.

It may be helpful to take a look at some real-life scenarios as well as some playground safety measures to address the problems.

How Falls Can Happen

Sophia, a 3-year-old, eagerly climbs up a ladder for a slide but then hesitates at the top. Typical of a preschooler, she couldn't predict her fear of sliding but now can't reverse her thinking to climb back down. She is also stuck at the top as other kids wait on the steep, narrow ladder. Trying to make the transition from the ladder to the slide, she falls and lands face first on the ground below. Thanks to the 12-inch depth of wood chips, she comes away with only some cuts, scrapes, and a big bump on her forehead.

Jake, a 9-year-old, and two of his friends are playing tag on a composite play structure. Approaching the edge of a high platform, he isn't able to stop fast enough and control his posture. He falls against a low guardrail and topples over it, landing on the ground. He fractures his arm after using it to break his fall.

How to Prevent Fall Injuries

- Install and maintain protective surfacing under and around play equipment to cushion falls.
- Limit the height of play equipment: four feet for preschool-age children and six feet for school-age children.
- Provide protective barriers on platforms and other elevated play surfaces — not just guardrails.
- Provide handholds at transition points.
- Use composite play structures with multiple entrances and exits to provide a range of challenge with at least one easy way up and down.
- Use composite play structures with large decks that give kids plenty of room to move around or to wait for their turn.

How Entanglement Can Happen

At the top of a slide, Carlos moves easily into a seated position and slides down. But a string in the hood of his jacket gets caught in a gap at the top of the slide. The string tightens around his neck and stops his sliding momentarily before the string breaks free. If the string hadn't broken, this entanglement incident could have caused strangulation.

While swinging, Jill loses her grip on the chains and slips out of the seat. She had been carrying a jump rope around her neck, and, as she falls, it catches on an open hook. Lucky for Jill, her brother releases the jump rope quickly. This kind of incident can also cause strangulation.

How to Prevent Entanglement Injuries

- Eliminate gaps, openings, or holes that might be catch points, especially at the top of slides and along the slide chute.
- Eliminate protrusions and projections that might be catch points, especially at the top of slides and along the slide chute.
- Eliminate open "S" hooks and other hardware that might be catch points, especially on swings.

How Head Entrapment Can Happen

Maggie climbs up a ladder to a high platform. On the top rung, her feet slip out from under her and she falls, sliding down feet first into the opening between the top rung and the platform. Luckily, her father catches her; if he hadn't, her body would have passed through the opening but her head would have gotten stuck. This kind of head entrapment can cause strangulation.

Drew is up on a deck, looking out through a protective barrier. He puts his head through two of the vertical rails and then turns his head in a different direction. When Drew tries to pull his head out, he can't. His mom helps calm him down and gets him to rotate his head, freeing it from the rails. This kind of head entrapment can cause strangulation.

How to Prevent Head Entrapment Injuries

- Eliminate all openings with any interior dimension between 3.5 and nine inches. This is to ensure that all openings formed by equipment components are either too small for a child's body or head to enter it or large enough for a child's head to pass through it.
- Apply entrapment criteria to all openings on playground equipment regardless of their height above ground. This is because young children may not have the cognitive or motor abilities necessary to extricate their heads even if their feet can touch the ground.

- Eliminate any V-shaped openings formed by equipment components that create angles less than 55 degrees, because small angles can also cause entrapment of a child's head or neck.

How Moving Impact Incidents Can Happen

Jared, a 2-year-old, sees his older sister across the playground. Given his age, he doesn't see everything going on around him and instead focuses on just one thing — getting to his sister. The moving swing that is outside his direct sight lines goes unnoticed. He runs right into the path of the swing, gets hit in the head, and suffers a concussion.

How to Prevent Moving Impact Injuries

- Remove any hard-hitting swings made of wood, metal or other heavy materials.
- Use swings that are made of lightweight materials such as rubber or plastic.
- Locate swings in a corner of the playground, away from other equipment and activities.
- Provide a low barrier, such as a fence or a hedge, around the swing area.

Match the Sizes and Skills of Children

As kids grow, not only do they get bigger and develop physical skills, they build thinking and social skills. All of these skills relate to safe use of playground equipment. So if playgrounds and playground equipment are designed to match their sizes and skills, kids are much less likely to get hurt.

To help prevent fall injuries, for example, platforms should have protective barriers, and the height of the protective barriers should be correlated to a child's center of gravity. If the height of the barrier is above the height of the center of gravity for the largest child in the intended age group, the barriers are better able to stop a fall. Similarly, matching the distance between consecutive rungs on a ladder to a child's step height makes climbing easier. And kids can hold on better to handrails and other hand-gripping components like monkey bars when their di-

ameter is designed to suit a child's hand size and to maximize grip strength. Matching the height of handrails to a child's height and reaching ability also helps. Safety measures like these will help prevent falls and, therefore, injuries.

Even within the same age group, a wide range of sizes and skill levels exists. Safety is increased when a child has options and, consequently, is not forced to complete an activity that is beyond his capabilities. If a playground offers a variety of equipment and activities which presents a series of graduated challenges, each child can practice and test the limits of her skills more safely at her own pace. A large climbing structure with different climbing events (such as a stairway, climbing net, and rung ladder) and different sliding events (such as straight slide, spiral slide, and sliding pole) can help children progressively build skills. Similarly, balance beams, suspension bridges, and swings all challenge balance skills in different ways.

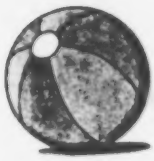
A key point to remember is that "higher" does not always mean more challenging. However, it does always means more dangerous. Both challenge and complexity can be added to play equipment horizontally and within a limited height. Providing a range of diverse challenges on playgrounds is an important factor in addressing individual developmental differences and can reduce injuries caused by children playing on equipment that doesn't match their sizes and skills.

Supervise Children

Because children routinely test boundaries and limits, good adult supervision is always a critical playground safety measure. Adult guidance, such as steering children away from potential hazards and redirecting their energies toward safe play, is an effective and essential means of preventing injuries. Of course, attentive supervision cannot replace safe design, high quality construction, and good maintenance. Nor can safe design, high quality construction, and good maintenance replace attentive supervision. Even the best playgrounds can be dangerous places if adults are not present and involved in children's play.

To provide good supervision, it is crucial that all adults who serve as supervisors on playgrounds are knowledgeable about injury patterns as well as safe playground design and maintenance. It is especially important for playground supervisors to know what types of play equipment are appropriate for children of different ages. This way, they can direct children toward safe play.

Younger children require more attentive adult supervision on playgrounds than do older children. Understanding some of the developmental differences and play patterns between preschool-age and school-age children helps determine the amount and nature of supervision. The bottom line is that the more adults know about playground safety, the better supervision they can provide.



Making Playgrounds Fun

For kids, life is about play. And play means having fun. What kids may not realize is that while they're playing, they're also learning. Play is a fundamental part of childhood and one of the most powerful learning tools. Through play, children discover the world and how to relate to other people. Because children have a natural curiosity to explore outside, the outdoor play environment can be a wonderful place to play and learn.

To make playgrounds fun for kids, activities and equipment need to match their play interests and developmental goals. That means, of course, that playgrounds for different age groups need to be different.

Preschool-Age Kids Playing...

Katie and Alex are enjoying their neighborhood playground. Typical of two- and three-year-olds, they're running around together doing the same things, each on their own. First to the sand pile. Alex is digging, so Katie is digging. Katie starts to fill up a bucket, so does Alex. Five minutes later they race over to the log cabin, where each begins the common drama of fixing dinner. Next to the playground equipment.

They start at opposite ends of the play structure but come together to slide down the double slide, again and again. Back and forth across the bridge and through the tunnel, they follow each other. They love the pair of steering wheels under the roof on the top platform because they can both pretend to drive this fantastic truck. After another trip back to their sand projects, Katie and Alex join their moms for a juice break under a big tree. Then they remember that they brought their wagons and begin a parade around the blacktop.

...On the Ideal Playground

- Active Play Area: Be sure that there are activities providing a range of challenge with different ways to climb, slide, etc. And be sure that equipment is not too high and that there is adequate protective surfacing. Since young children also enjoy and learn from other kinds of play, the active play area shouldn't dominate the playground.
- Constructive Play Area: sand is the favorite digging and building material for most preschoolers, although dirt is lots of fun, too.
- Opportunities for Social and Pretend Play: small, semi-enclosed spaces promote wonderful interaction among pairs, and great use of children's imaginations.
- Opportunities for Play with Wheeled Toys: a paved riding path is an excellent way to help define different play areas.
- Quiet Play Area: a shady patch of grass provides a welcome retreat for a story or snack.
- Natural Features: a hill to roll down, flowers to smell, or even just a big tree can enhance the outdoor learning environment.

School-Age Kids Playing...

Sarah, Jackie, and Marissa love to swing, swing, and swing. It's a great time to chit chat. Meanwhile, Chris, Ryan, Miguel, and David are skate boarding. Eventually, these third and fourth and graders end up on the play structure, testing each other in races on the overhead ladder, ring trek, and sliding pole. The play structure then becomes a big ship and the challenge is not falling into the ocean. Later, Ryan, Jackie, Chris and Marissa find a ball and play four-square on the blacktop. David and Miguel examine each other's latest baseball cards over at the picnic table. Sarah stays at the play structure for a while to hang out on the turning bars and try the balance beam. When she heads over to the

sand pit, the others all join her and they work together to build an elaborate sand castle.

...On the Ideal Playground

- Active Play Area: Be sure to provide some more challenging play events on a more complex play structure — but don't forget protective surfacing and keep equipment within height limits. Older children are more focused on active play, so this should be the dominant area.
- Social/Quiet Play Area: Peer groups are especially important, so kids need spaces to hang out — like a cluster of benches or a picnic table. A grassy hill to sit on or a big tree to sit under also satisfy the need.
- Area for Organized Games: A grass field or a paved area is suitable.
- Opportunities for Constructive and Pretend Play: Although interest in constructive play begins to wane, it's still worthwhile to provide sand during the early elementary years. Since older kids tend to incorporate pretend play with active play, a separate area isn't always necessary.
- Natural Features: lots of rocks to explore, an herb garden to plant, or a bird feeder hanging from a tree to study can enhance the outdoor learning environment.

How Does your Local Playground Measure Up?

America's playgrounds continue to threaten the safety of children. Even though we know the common causes of playground equipment-related injuries and deaths, these hazards still exist on most playgrounds. Since 1992, Consumer Federation of America (CFA) and Public Interest Research Groups (PIRG) have teamed up to conduct four nationwide playground surveys. Although the surveys document some improvement over time, overall data show that playgrounds are still far from safe and some of the results are frightening.

CFA/PIRG 1998 Survey Results
(760 playgrounds surveyed in 25 states)

- **87 percent of playgrounds did not have adequate protective surfacing.**
- **62 percent of playgrounds had climbers higher than six feet.**
- **37 percent of playgrounds had slides higher than six feet.**
- **40 percent of playgrounds had clothing entanglement hazards.**
- **42 percent of playgrounds had head entrapment hazards.**
- **12 percent of playgrounds had heavy, hard-hitting swings.**

Most older playgrounds, and even a few built recently, fail to meet even the most basic safety guidelines — leaving children vulnerable to potentially life-threatening hazards. These playgrounds must be renovated, with greater attention focused on repairing or removing dangerous equipment and installing protective surfacing.

The good news is that most equipment being sold today for new playgrounds is significantly safer than what was available just five years ago, with improvements in design, quality, and durability. Significant changes in the playground industry — pushed by the strong advocacy efforts of groups like CFA and parents like you — have brought much better compliance with safety guidelines.

National Playground Safety Guidelines

- CPSC *Handbook for Public Playground Safety* (1997): The federal government, through the Consumer Product Safety Commission, has long studied playground injuries and offered voluntary safety guidelines. There are no federal mandatory standards governing the safety of playgrounds in this country. The CPSC handbook provides general guidelines that define a baseline of safety for playground equipment and surfacing.
- CFA *Report and Model Law on Public Play Equipment and Areas* (1998): As an advocacy organization, Consumer Federation of America believes that more stringent and more detailed safety and design criteria should be available. While there are no conflicts between the safety guidelines offered by CPSC and CFA, the CFA report is much more comprehensive — especially in addressing developmental differences between preschool-age and school-age children. The CFA report presents its safety and design criteria in the form of model law provisions so local and state agencies can easily mandate playground safety measures.
- ASTM F1487-95 *Standard Consumer Safety Performance Specification for Playground Equipment for Public Use* (1995): the American Society for Testing and Materials is a private standards development organization. This voluntary standard is more technical and intended primarily for manufacturers.

PLAYGROUND SAFETY CHECKLIST

Extensive research has identified the playground hazards which cause injuries and death. The following checklist can be used to evaluate the general safety of your local playground. Check the playgrounds where your child plays — including the equipment and surfacing at your local schools, parks, community centers, churches, and child care centers — to see whether there are dangerous hazards.

❑ Is there a lack of protective surfacing under or around play equipment?

Protective surfacing is the most critical safety factor on playgrounds because approximately 75 percent of all injuries are caused by falls.

Hard, paved surfaces such as concrete and asphalt as well as earth surfaces such as grass, soil, and hard packed dirt *are not acceptable* for use under and around play equipment. None of these surfaces provides adequate protection against fall-related injuries. Falls onto concrete or asphalt from as low as 2 inches can cause life-threatening head impact injuries.

Acceptable protective surfacing materials include:

- Loose-fill surfacing materials — such as wood chips, shredded bark mulch, sand, and pea gravel — when installed and maintained at depths of at least nine to twelve inches and provided that they are not wet or compacted. Shredded tires can also meet resiliency requirement at a depth of at least six inches.
- Unitary synthetic surfacing materials — including some premolded rubber tiles and pour-in-place systems.

❑ Are pieces of play equipment too close together? Is there a lack of protective surfacing where children might fall?

A fall zone is the area under and around a piece of play equipment where a child might fall. The fall zone should have protective surfacing and be free of other equipment or obstacles onto which a child might fall.

- If two pieces of adjacent stationary play equipment are no more than 30 inches in height, their fall zones may overlap with a minimum distance between structures of six feet. If adjacent equipment is higher than 30 inches, the minimum distance between structures should be nine feet.
- For climbing equipment, merry-go-rounds, seesaws, and spring rockers, the fall zone should extend a minimum of six feet in all directions from the perimeter of the equipment.
- For slides, the fall zone behind the access ladder and to the sides of a slide should extend a minimum of six feet from the perimeter of the equipment. The fall zone in front of the exit of a slide should extend a minimum distance of 6 feet from the end of the slide chute or for a distance of H+4 feet, whichever is greater. H is the height of the slide platform.
- For swings with conventional seats, the fall zone should extend a minimum of six feet from the perimeter of the support structure on each side as well as a minimum distance of twice the height of the pivot point in front of and behind the swing seats. The fall zone on the sides of a swing structure may overlap with that of an adjacent swing structure. But the fall zone in front of and behind the swings may not overlap with any other fall zone.

Is there any equipment too high above ground?

The highest climbing rung or platform on climbing equipment or the height of the top of a slide, for example, should not exceed:

- Four feet above the protective surfacing when designed for preschool-age children.
- Six feet above the protective surfacing when designed for school-age children.

Do elevated play surfaces — such as platforms, bridges, walkways, and ramps — lack adequate guardrails or protective barriers to prevent falls? Can children inadvertently fall off high elevated surfaces?

Are swings too heavy, too close together, or too close to support structures?

- Swing seats should not be made of wood, metal, or any other heavy, rigid materials. Heavy, hard hitting swings — including animal swings, multiple occupancy swings such as gliders (but not tire swings), swinging exercise rings, and trapeze bars — may cause life-threatening head impact injuries.
- No swing structures should be attached to other play equipment or composite structures.
- No more than two swing seats should be suspended in the same section of the support structure.
- Infant/tot seats should not be suspended in the same section of a swing structure as regular swing seats.
- Swings with conventional seats or tot seats should have horizontal clearances of at least 24 inches between adjacent seats and 30 inches between the swing seat and an adjacent structural component.

Does the play equipment have any head entrapment hazards?

Any opening — except those where the ground is the lower boundary — with an interior dimension between *3.5 and nine inches* may cause head entrapment, and such incidents can result in strangulation. Entrapment may occur when a child enters an opening, either head first or feet first, but cannot withdraw his or her head because the opening is too small.

Does the play equipment have any entanglement hazards on which children may catch clothing or anything else around their neck?

Entanglement incidents can result in strangulation.

- Look for open "S" hooks, especially on swings.
- Look for gaps, openings, holes, protrusions, or equipment components which may act as hooks or catch points, especially at the top of slides.

- [ ] **Does the play equipment have any sharp points, corners, or edges?**

- [ ] **Does the play equipment have any hardware or components which are dangerous protrusions or projections?**

- [ ] **Does the play equipment have any exposed moving parts or other junctures which create dangerous pinch, crush, or shearing points?**

- [ ] **Does the play equipment or area have any exposed concrete footings or environmental obstacles, such as rocks or roots, which create trip hazards and may cause impact injuries?**

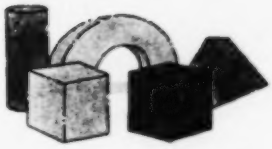
- [ ] **Does the play equipment show any signs of deterioration or corrosion?**

- [ ] **Does the play area lack maintenance or appear to have been vandalized?**

- Look for loose splinters, large splits, and decay on wood components, rust on metal components, and splitting or cracking on plastic components.
- Look for any paint that is peeling, cracking, chipping or chalking; if you find any, ask local authorities to test it to determine if it contains lead.
- Look for missing or damaged equipment components, checking items such as handholds, guardrails, swing seats, and benches.
- Special attention is warranted for deterioration and corrosion on structural components where they contact the ground; look for any emerging anchoring problems that may cause instability.

Completing this checklist provides an initial analysis of your playground's safety. If you've answered "Yes" to any of these questions, a more detailed analysis of the playground is warranted. And, it's time to start

advocating for safety improvements. Hopefully, you will be able to work together with the owner/operator of the playground to see to it that a thorough safety inspection is completed by a trained inspector and that a plan for upgrading or removing hazardous equipment is carried out. Most importantly, ensure that adequate protective surfacing gets installed and maintained.



How to Change Playgrounds in Your Community

Don't be intimidated if you have never before worked to make a change in your community. The "trick" to making change happen in your city or town is to go through all the steps and be persistent. In the next few pages, you have a step-by-step guide for a successful campaign to make local playgrounds safer for children.

Collect Information

One key to successful advocacy is becoming an educated consumer. By reading and using this guide, you've got a head start. Throughout this guide, other important resources which provide more detailed injury data and safety guidelines are mentioned, such as CFA's *Report and Model Law on Public Play Areas and Equipment*. The resource section that follows tells you how to get this and other playground safety publications. Studying these will help you build a strong case for improving the safety of your playground.

Another area to research is survey data. The 1998 CFA/PIRG survey report, *Playing it Safe*, provides survey findings for playgrounds across the country, listed by state and by individual playground. You can look up your state to see if your playground was surveyed and how it fared.

This will also tell you which local consumer group conducted the survey — and they are likely to be a good ally. Be sure you do your own initial survey using the *Playground Safety Checklist* in this guide.

Finally, you should familiarize yourself with the playground industry. There are a lot of different manufacturers and contractors offering a wide range of equipment, surfacing, and installation services. It's a good idea to collect catalogs and other product literature from the major manufacturers. Most national manufacturers sell their equipment through local sales representatives. You can start your search with your local yellow pages or the Internet.

Playground Industry Directory

- Contact information and company profiles for manufacturers, dealers, and agents of playground equipment, surfacing, and site amenities.
- Industry resources such as consultants, publications, nonprofit organizations, parks and recreation associations are also listed.
- Information is sorted alphabetically, geographically, and by product type.
- Call toll-free to order: 800-352-1137
- Visit the Internet site: www.world-playground.com

Contact the Playground Owner/Operator

Armed with plenty of information, the next step is to contact the playground owner/operator. Share your findings from completing the *Playground Safety Checklist* as well as what you've learned about playground injuries and playground safety. You will probably be able to tell quite quickly whether or not the playground owner/operator is going to be supportive of renovations or not. Securing this support is critical — although in some cases it will be a challenging task. If you run into opposition and the information you present isn't enough to make your case, you may need to do some more advocacy and enlist other key supporters.

With the support of the playground owner/operator — or as part of the process of gaining that support — you can establish a playground safety committee to direct renovations. This committee can take responsibil-

ity for overseeing all the nuts and bolts of the project, such as reviewing national safety guidelines, analyzing hazards on your playground, researching available playground equipment and surfaces, checking references for manufacturers and contractors, building support from parents and others in the community, and fundraising.

The Playground Committee

People to consider for your playground committee include:

- Playground Owner/Operator
- Parents
- Community Leaders, such as members of the city council, civic associations, school board, local foundations, churches or synagogues
- Teachers (even if it's not a school playground)
- School Administrators, such as the principal or director of physical education
- Landscape Architects
- Parks & Recreation Personnel (especially those who inspect and maintain playgrounds)
- Nurses and/or Doctors (such as pediatricians, orthopedists, and emergency department staff)
- Risk Managers (including insurance company representatives)
- Police Officers

Recruit Allies

Building a shared consensus that your playground needs safety improvements is an important step toward getting the job done. Moreover, if you can establish positive links with key individuals early, you may be able to keep your project moving forward more smoothly. To create broad support for your project and possibly expand the playground committee, you can reach out to related groups — such as the school PTA, community association, or local government. The right liaison to the property owner, for example, can make all the difference.

Community Open Houses — A good strategy to bring people and resources together is to hold an open house. Consider using a fact sheet to highlight the playground hazards and project goals as well as to solicit volunteers and contributions.

> *"A sense of community ownership really got our project off the ground."*

By hosting an informal gathering, the playground committee, safety consultant, and designer got input from a variety of community members, including local kids. In addition to ideas for playground renovations, this forum provided leads to donated materials such as wood chips, donated services such as landscaping, and even financial contributions.

Teachers as Allies — Teachers can be an excellent source of ideas as well as effective allies. Finding good liaisons to the different administrators and playground owners/operators is especially important.

> *"We thought the key to safety was to build a playground appropriate for the age of our kids, so we talked to their teachers."*

A group of parents at a preschool asked the teachers what they would like to see — and not see — on the new playground. Working together, they agreed on what kinds of equipment and activities to include. From then on, the teachers were advocates, too. The parents also asked the director of the preschool for her ideas. And because the preschool was housed in a church, having one of the parents serve as a liaison to the church was instrumental.

Help from the Media — Getting local media coverage can get people involved.

> *"The media immediately took notice when I attended a city council meeting and talked about playground safety and the hazards kids face on our playgrounds. So, I went to as many meetings as I could."*

Together with lots of grassroots advocacy, a few good stories in the local papers and on the local news raised community awareness about playground hazards. As concerns about the safety of the neighborhood playground grew, more community leaders got on board to help ensure that the playground renovation would move forward successfully — and it did.

Establish a Playground Safety Plan

The most important job for the playground committee is to establish a playground safety plan, and its biggest job is to carry it out. If your initial check for hazards on your playground revealed general safety problems, a more thorough inspection should be used to determine what renovations are necessary. This detailed analysis of possible hazards should be conducted by someone trained in playground safety, design, inspections, and maintenance. Various safety consultants, school personnel, and parks personnel may have the required training. For example, the National Playground Safety Institute, run by the National Recreation and Parks Association, trains playground inspectors. These seminars have been offered at different times in different locations across the country, so someone in your area may already be a certified inspector.

After the completion of a comprehensive inspection, a timetable can be set that prioritizes playground renovations based on the severity of hazards. Sometimes, equipment will be so hazardous that the best course of action is to remove it, even if it can't be replaced immediately.

Safety improvements should start with protective surfacing and eliminating other life-threatening hazards such as clothing entanglement, head entrapment, hard-hitting swings, and equipment collapse. Given the large percentage of injuries caused by falls, ensuring that there is adequate protective surfacing under and around all equipment is the most important safety measure on any playground. For ongoing safety, your plan should also include provisions to institute an inspection and maintenance program.

Draft Purchasing Guidelines for any New Equipment

If you have the opportunity to get some new equipment, your committee can include purchasing guidelines as part of your playground safety plan. It is essential, for example, to require certification from equipment manufacturers of compliance with at least the safety guidelines of the current CPSC handbook. Also consider adding other safety specifications to your purchasing guidelines such as height limits for climbing equipment and slides of four feet for preschool-age children and six feet for school-age children.

You should meet with representatives from several manufacturers to discuss their equipment and approach to safety. Only work with sales representatives who show a solid understanding of and dedication to safe playgrounds. Other issues to explore when evaluating different manufacturers include warranties offered, product liability and other insurance coverage, and installation specifications.

Some manufacturers may provide their own installers and others certify contractors who install their equipment. Requiring a final inspection and sign-off on proper installation by the manufacturer's representative is recommended strongly. Check references for different manufacturers and contractors by talking with the owners/operators of other playgrounds. You can also check with your local government consumer affairs office and the Better Business Bureau to see if any complaints have been filed.

It often helps to go see some other playgrounds to get ideas about equipment from different manufacturers and about layout possibilities. Identifying the age group at the outset of the design process is critical. To be safe, the design must include the kinds of equipment and activities suitable for the ages of kids who will be playing there. In addition, ensure that the manufacturer and/or designer you select will provide a site plan showing the equipment and layout, including the required fall zones for protective surfacing.

As for any big purchase, it is important to shop around and research your options. And remember, when making your choice, choose the equipment and overall playground design on the basis of safety, quality, and age-appropriateness — not just cost. It's better to purchase less equipment than to sacrifice your child's safety. You can always add more equipment in phases as funds are available.

Design for Play — Some of the playgrounds being designed and built today have a new look and a new feel, and kids love it. Providing a range of play opportunities makes these playgrounds more fun and better learning environments.

> *"The concept of a fun playground is more than just active play equipment. We wanted to build an exciting place where kids could learn — and be safe."*

At a large inner-city elementary school, a new outdoor area was planned to totally change the way its community viewed playgrounds. Parents and teachers alike were happy with the design and its links to the school's curricula for all grade levels. In addition to an active play area with new equipment and protective surfacing, this design takes full advantage of natural features to enhance learning opportunities with a butterfly garden, wildflower meadow, orchard and berry areas, and vegetable and herb gardens. There are also spaces for reading, science activities, and creative projects.

Generate Financial Resources and Other Support

To some extent, the kind and amount of resources you will need — and where you might get them — depends on whether you're involved with a school, church or synagogue, child care center, or neighborhood playground. One thing is for sure, the more you reach out and network … the more potential sources of money and other key resources you'll be able to tap.

Fundraising Possibilities

- Local government — the city council or school board, for example, can include playground improvement funds in their budget.
- State or community funds – in some cases these may be discretionary funds that can be disbursed by state and local officials.
- Local foundations, civic groups, and men's and women's clubs — check for grant opportunities.
- Local businesses — approach businesses, especially those located near the playground site, and ask them to help sponsor the renovation project; acknowledge sponsors at events and in written materials.
- Door-to-door advocacy — build support with a petition and seek contributions.
- T-shirt sales — design a playground safety T-shirt with your playground's name; profits from sales can help meet the project budget.
- Special events — hold a walk-a-thon or some variation like a jump roping or free throw shooting contest for which participating families and kids can get sponsors
- Coin collections — kids can contribute loose change during the school year to help save for playground renovations.

- Direct mail — identify families who use the playground, explain the safety concerns, and ask for help, financial or otherwise, to improve the playground and prevent injuries.

Finding the Money — Looking for funding takes creativity and perseverance. If you look hard enough, you may find help from unexpected sources. Often, grants and contributions from several sources can be combined to raise the funds necessary for a playground renovation.

> *"You never know where your support will come from."*

In one community, the local volunteer firefighters were influential advocates for a playground renovation project. The firefighters publicly supported the project at every opportunity and helped generate resources. Playground volunteers helped with the firefighters' annual fund-raiser, so the firefighters donated half of the funds raised to the playground project. And when construction day came, the firefighters were there to donate their time and labor.

A Simple Letter — Sometimes all you have to do is ask.

> *"Almost every family we asked made a contribution — ranging from five to thousands of dollars — and we appreciated each one."*

Teachers at a preschool suggested that families contribute to the playground fund instead of giving them holiday gifts. A letter with this suggestion from the playground committee to families of kids enrolled in the preschool as well as of those who graduated recently was so successful that they were able to expand the project budget.

Playground Work Days — Volunteer work days are a great strategy for gathering resources for any kind of playground.

> *"All I had to do was pick up the phone and call a few friends and before long there was a whole group of families ready and willing to help."*

At a church school, parents and kids worked together to clean up the landscaping and get the playground area ready for renovations. Church members with ties to local businesses arranged for in-kind donations such as removing the dangerous old equipment and pouring concrete for a new piece of sidewalk. Then, after new equipment was professionally installed, the volunteers had a picnic work day to finish off site details like spreading the wood chips. The project was complete when the kindergartners planted two new apple trees in the playground.

Promote Change!

Your overall goal as an advocate is to promote change — change that improves the safety of your playground. As an injury prevention strategy, promoting change can take two forms:

- You can work to educate parents, other caregivers, and school and parks personnel about playground safety. Hopefully, they will change their behavior in ways that reduce the risk of injury. Becoming advocates, better supervisors, or trained inspectors are all ways that adults can help improve safety.

- You can also work to educate children so that they understand the rules for safe play.

To change the environment directly, you can work to minimize hazards on playground equipment and playgrounds. Promoting environmental change can be achieved one playground at a time or on a broader scale, such as advocating for playground safety legislation. The strategies you choose will depend on your goals.

Playground safety advocates like you have been successful at achieving important renovations such as installing protective surfacing or removing dangerous equipment at playgrounds across the country. You, too, can make a difference and improve your playground. By completing the initial inspection for major hazards included in this guide, you will have taken an important step. Then you can use that information to promote change.

One by one, playgrounds are becoming safer. And with more and more attention being paid to the play needs and interests of children, playgrounds are also becoming more fun!

ADDITIONAL INFORMATION & RESOURCES

Consumer Federation of America (CFA)
Consumer Federation of America Foundation
1424 16th Street, N.W., Suite 604
Washington, DC 20036
202-387-6121
www.consumerfed.org
Non-profit federation of 240 pro-consumer organizations. Since 1992, CFA has made available detailed playground safety information to parents and other consumers.

- *Report and Model Law on Public Play Areas and Equipment*. (Third Edition, 1998). Cost: $40.
- *Playing it Safe: A Fourth Nationwide Safety Survey of Public Playgrounds* (1998). Cost: $20.
- *Home Play Equipment: Safety Tips for Buying and Using* (1998). Free with self-addressed stamped envelope. Send request to: CFA Home Play Equipment Tips, PO Box 12099, Washington, DC 20005-0999.
- *Fun and Safe: A Playground Guide for Parents* (1998). Cost: $2.

U. S. Consumer Product Safety Commission (CPSC)
Office of Information and Public Affairs
Washington, DC 20207
800-638-CPSC
www.cpsc.gov
Federal government agency. Call or write for a free copy of the current CPSC *Handbook for Public Playground Safety* (Publication No. 325), *Home Playground Safety Tips* (Publication No. 323) or other publications; or visit CPSC's website to download information.

American Society for Testing and Materials (ASTM)
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
610-832-9500
Private membership organization that develops voluntary industry standards, including technical guidelines for public playground equipment, protective surfacing, and home playground equipment.

Boundless Playground National Resource Center
968 Farmington Avenue
West Hartford, CT 06117
860-586-8990
www.boundlessplaygrounds.org
National non-profit organization working with communities, schools and families to support the development of playgrounds that are universally accessible to children of all abilities. Provides technical assistance and referrals to support model playgrounds where no child is excluded due to non-existent or limited access.

The National Program for Playground Safety
School of Health, Physical Education & Leisure Services
University of Northern Iowa
Cedar Falls, IA 50614-0161
319-273-2416; 800-554-PLAY; Fax: 319-273-5833
www.uni.edu/playground
Funded by a grant from the U.S. Centers for Disease Control and Prevention, this program was established in 1995 to create a national plan for the prevention of playground injuries, including development of a national clearinghouse of playground safety materials and a hotline about playground injury prevention.

National Recreation and Parks Association (NRPA)
22377 Belmont Ridge Road
Ashburn, VA 21048
703-858-0784; Fax: 703-858-0794
www.nrpa.org
Membership organization which operates an information resource department, publishes a journal, and holds an annual conference. Many playground references and resources available; call for a current catalog. NRPA also sponsors the National Playground Safety Institute, a training program to certify playground inspectors. For a referral to a trained inspector in your area call 703-858-2148.

International Play Equipment Manufacturers Association (IPEMA)
8300 Colesville Road, Suite 250
Silver Spring, MD 20910
800-395-5550
www.ipema.org
Non-profit international trade association for manufacturers of play equipment and surfacing products. IPEMA provides third party certification through Detroit Testing Laboratory to validate a manufacturer's conformance to ASTM F1487-95. For more information, including lists of certified products, check IPEMA's website.

Playground Industry Reference Directory
800-352-1137
www.world-playground.com
This directory provides contact information and company profiles for manufacturers, dealers, and agents of playground equipment, surfacing, and site amenities. Industry resources such as consultants, publications, non-profit organizations, parks and recreation associations are also listed. Information is sorted alphabetically, geographically, and by product type.

U.S. Architectural and Transportation Barriers Compliance Board
1331 F Street, NW
Washington, DC 20004-1111
202-272-5434
www.access-board.gov/rules/playfac.htm
This federal agency, also referred to as the Access Board, is charged with developing accessibility guidelines and overseeing compliance with the Americans with Disabilities Act (the ADA). A Federal Recreation Access Advisory Committee published a report that includes draft accessibility guidelines for playgrounds and other outdoor areas: *Recommendations for Accessibility Guidelines: Recreational Facilities and Outdoor Developed Areas* (Publication S26). Call 202-272-5434 to obtain a free copy of the report; or order it by Fax at 202-272-5447.

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